

**Department of Electronics and Communication Engineering** 

Name of the Activity: Experiential Learning

Faculty Name: Ms. Rajidi Sahithi Class / Semester: II ECE B / II Sem

Academic Year: 2022-23

Subject Name: Linear IC Applications

**Topic:** Unit III & IV (Applications of IC 741 and IC 555)

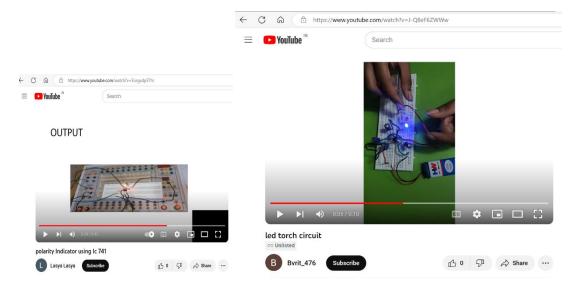
**Brief Write-up (Not exceeding 200 Words)** 

Experiential learning is an educational approach that emphasizes learning through direct experience and reflection on those experiences. It is a hands-on, active learning method that encourages students to engage with real-world situations and problems. The primary objectives of experiential learning are to enhance understanding, retention, and application of knowledge and skills. In this activity whole class is divided in 23 teams with team size 3 to 4. Designed an application and took video of the design and uploaded in youtube.

#### **Objective:**

Experiential learning aims to deepen understanding by allowing students to see theoretical concepts in action. It helps bridge the gap between theory and practice. Active engagement and practical application of knowledge improve retention rates. When students personally experience concepts, they are more likely to remember and apply them in the future.

#### **Photographs:**



For any queries, please contact to below mail: sahithi.r@bvrithyderabad.edu.in



#### **BVRIT HYDERABAD**

# College of Engineering for Women (Approved by AICTE, Affiliated to JNTUH) UGC Autonomous

(Accredited by NBA – EEE, ECE, CSE & IT and NAAC with 'A' Grade)

Event Name: First write Score bright

**Date (s) of Conduction:** 23-02-2023 at 11.33.10AM (3<sup>rd</sup> hr).

No. of Participants: 62

Organized by: Dr.M.Parvathi

**About the Event:** Identification of embedded device based on field, Understanding the importance of embedded device based on type application. Asked the students to form as four batches with 20 members in each batch, to come quickly to the board to write type of embedded system and application in their respective column, finally the score was announced for winners based on the maximum number of applications and devices were identified.

#### **Photos**





The activity is mapped to the following CO

CO No.	CO No. Course Outcomes			
C326 - Embedded System Design - EC613PE				
C326.1	Distinguish the embedded systems from general purpose processing systems.			

Evaluation Criteria: Performance evaluation was done based on their score outcomes. Row-3 stood first with maximum score of 22, Row-1 stood second with the score of maximum 19.

Row Numbers	Score Obtained	Position Placed
1	19	Second
2	17	
3	22	First
4	15	



#### **BVRIT HYDERABAD**

# College of Engineering for Women (Approved by AICTE, Affiliated to JNTUH) UGC Autonomous

(Accredited by NBA – EEE, ECE, CSE & IT and NAAC with 'A' Grade)

Event Name: Quiz

**Date (s) of Conduction:** 24-03-2023 at 11.45AM (4<sup>th</sup> hr).

No. of Participants: 64

Organized by: Dr.M.Parvathi

**About the Event:** Quiz on mapping the components according to the type of embedded Application. Asked the students to form as four batches with 20 members in each batch, by calling each batch with a quiz question related, one student from the specific batch should come and map the correct answer, if not answered then the question will be passed to the next batch, finally based on the highest score the particular batch is announced with winner position.

#### Photos:



The activity is mapped to the following CO

CO No.	CO No. Course Outcomes			
C326 - Embedded System Design - EC613PE				
C326.2	Recommend suitable hardware for different applications of embedded systems.			

Evaluation Criteria: Performance evaluation was done based on their score outcomes. Batch 2 stood first with maximum score of 18, Batch-3 stood second with the score of maximum 17.

Batch Numbers	Score Obtained	Position Placed
1	16	
2	18	First
3	17	Second
4	12	



#### Name of the Activity: Chart preparation

Faculty Name: T. Amy Prasanna Class / Semester: I CSE C Academic Year: 2022-23

Subject Name: Electronic Devices and circuits

Topic: Unit I (Diodes)

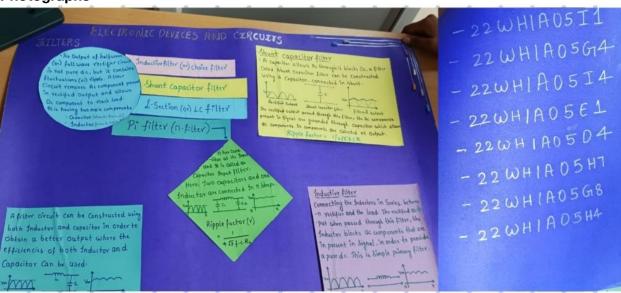
#### **Brief Write-up (Not exceeding 200 Words)**

students are divided into groups, They need to make a chart on given topic by collecting required material. This activity makes the students to involve in a team and discuss various concepts with peer and there by enhancing knowledge on those concepts.

#### **Objective:**

This gives a wide range of scope to the students to discuss the concepts as a group and help them in better understanding the concepts.

#### **Photographs**



For any queries, please contact to below mail: prasanna.tella@bvrithyderabad.edu.in



Name of the Activity: Crossword Puzzle

Faculty Name: T. Amy Prasanna

Class / Semester: I CSE B Academic Year: 2022-23

Subject Name: Electronic Devices and Circuits

**Topic:** Unit I,II(PN Junction Diode and its Applications)

#### **Brief Write-up (Not exceeding 200 Words)**

students are divided into groups; They are asked to prepare Crossword puzzle by preparing questions from Unit 1 and 2 related to PN junction diode. It is the activity to encourage students to work as a group by discussing various topics in order to prepare questions and answers and finally build a Puzzle.

#### **Objective:**

This gives a wide range of scope to the students to analyze the concepts as a group and help them in better understanding the concepts.

**Photographs** EDC Group Activity. [CROSSWORD] 5. Half wave 8. Rertifier 11. Load 2. Diode 6. Full wave 9. Clippers 12. Efficiency Q I M C Z I L I D F F H J G R X L F G D M A U P Z F Y X M I Z S L Q R I T G V R H 1 E D 1 0 D E L B 0 X R C H C K J A L X W K P N GANPOWERAMWNI F S E E G C T F A V T P O C N F D R E C T I F I E R I T SIVEFEPBWFUOO BYAXZVOLTAGEOPR Power 14. Ripple 15. Dynamic L. PRANAVI - 22WHIA0596 K- PRAGN A = 22 WHIHO586 DEEKSHITA · (H - 22WHIHO 589

For any queries, please contact to below mail: prasanna.tella@bvrithyderabad.edu.in



#### Name of the Activity: Learning by Doing and Discussion

Faculty Name: Ms. M. Praveena Class / Semester: II/I ECE B Academic Year: 2022-23

Subject Name: Digital System Design

**Topic:** Unit II (Design of combinational circuits)

#### **Brief Write-up (Not exceeding 200 Words)**

This is a group activity wherein students confer among themselves over a concept on which they were asked to give their views. This is in turn passed on to next group who will study the first group representation of the concept and add either question marks over the representation which require clarity or put a cross mark over the representation which are wrongly interpreted. Like this the paper will be passed on to all the groups and finally the first group receives its paper and then they need to give justifications to all the representations done by them, answer all the guestion marks and correct all their mistakes.

#### **Objective:**

This gives a wide range of scope to the students to discuss with their peers regarding the concepts and help them in better understanding the concepts because of these discussions in peer group and identifying the mistakes done by other peers.

#### **Photographs**





For any queries, please contact to below mail: praveena.m@bvrithyderabad.edu.in



### Name of the Activity: Retaining concepts by using Probing Questions

Faculty Name: Ms. M. Praveena Class / Semester: I / II ECE A Academic Year: 2022-23

Subject Name: Electronic Devices & Circuits

**Topic:** Unit V (Special Purpose Diodes)

#### **Brief Write-up (Not exceeding 200 Words)**

This is a group activity wherein students confer among themselves over a particular diode for a period of 10min. They were given instructions of what type of questions will be asked. Then one group was selected and one by one every student needs to give a fact related to construction, working & applications related to the device they were allotted. All the other batches have to pay a close observation to what this batch is explaining and need to identify any faults in the facts they have explained. This procedure is repeated with all the other batches.

#### **Objective:**

This gives a wide range of scope to the students to discuss with their peers regarding the concepts and help them in better understanding the concepts because of these discussions in peer group and identifying the mistakes done by other peers.

For any queries, please contact to below mail: praveena.m@bvrithyderabad.edu.in



#### Name of the Activity: Crossword Puzzle

Faculty Name: Ms. M. Praveena Class / Semester: II/I ECE B Academic Year: 2022-23

Subject Name: Digital System Design

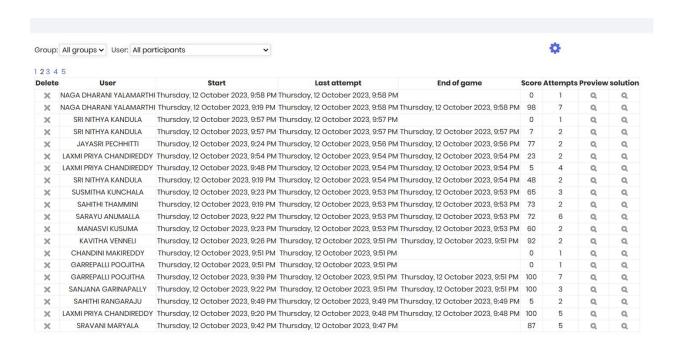
Topic: Unit 1

#### **Brief Write-up (Not exceeding 200 Words)**

Created a glossary for all the concepts learnt in Unit I (number systems, binary codes) and shared a crossword created from the glossary to the students through Moodle course portal. Students have attempted the crossword and from this we have analyzed the percentage of concepts learnt by students and thereby guided them on the concepts they were lacking.

#### **Objective:**

To Understand the grasping level of students regarding topics learnt and understand the speed of content delivery.



For any queries, please contact to below mail: praveena.m@bvrithyderabad.edu.in



**Department of Electronics and Communication Engineering** 

**Activity:** Zigsaw Puzzle

Faculty Name: Dr J Naga Vishnu Vardhan

Class / Semester: II – I / ECE –B

Academic Year: 2022-23

Subject Name: Probability Theory and Stochastic Processes

**Brief Write - Up** 

Topics studied in Unit-I are made like a flowchart (order of topics). This flowchart was printed on a paper and made into pieces. Students are divided into batches and have three students in each batch. Whichever team arranges the flowchart in less time but correctly and explain briefly were declared as winners

#### **Objective:**

Students will recall the concepts and also aware of the flow of topics and their inter connection

#### **Photos:**



Pieces in Zigsaw Manner



Trying to arrange



Finally in an Order

Winners: (Submit the puzzle in correct order in less time)

**1**st **Position**: Ms. S Joshitha (21WH1A0469), Ms. M Sweeja (21WH1A04A8), Ms. M Jahnavi (21WH1A0475)

**2<sup>nd</sup> Position**: Ms. M Sai Rushitha (21WH1A0489), Ms. P. Rishika (21WH1A04C8), Ms. P. Keerhti (21WH1A04D0)



**Department of Electronics and Communication Engineering** 

**Activity: Techno Crossword** 

Faculty Name: Dr J Naga Vishnu Vardhan

Class / Semester: II – I / ECE –B

Academic Year: 2022-23

Subject Name: Probability Theory and Stochastic Processes

**Brief Write - Up** 

Topics studied in Unit-II are made like a Techno Crossword. Students are divided into batches and have two students in each batch. Whichever team completes the crossword in less time but correctly were declared as winners

### **Objective:**

Students will recall the concepts and can know the name and how to fit it in the boxes provided for the statement given

#### **Photos:**





Students working on Techno Crossword

Student Teams

Winners: (All correct and in less time)

1st Position: Ms. N. Manasa (21WH1A04B6) and Ms. RAmruthalasya (21WH1A04B5)

2<sup>nd</sup> Position: Ms. P Sripthi (21WH1A04C9) and Ms. M Srivally (21WH1A04A3)



Activity: Practical Demonstration of plotting Radiation Pattern for Various antennas

Faculty Name: Dr J Naga Vishnu Vardhan

Class / Semester: III - II / ECE -B

Academic Year: 2022-23

**Subject Name: Antennas and Propagation** 

**Brief Write - Up** 

Students were taken to Communication Lab and shown different types of antennas like simple dipole, folded dipole, yagi-uda, array, loop, rhombus, log periodic etc. Students were shown practically how current reception varies when transmitting antenna is rotated in  $360^{\circ}$  keep receiving antenna constant. From the readings noted (angle ( $\theta$ ) and current (in  $\mu A$ ), polar plot was drawn using the software. From the plot students are able to find and understand various parameters

**Objective:** To understand the radiation pattern of various antennas and how the parameters varies

#### **Photos:**



Antenna Working Mechanism Demonstration



Plotting Radiation Pattern using software – Explanation by Mr. Prasad, Lab technician



**Activity:** What's Next?

Faculty Name: Dr J Naga Vishnu Vardhan

Class / Semester: III - II / ECE -B

Academic Year: 2022-23

**Subject Name: Antennas and Propagation** 

**Brief Write - Up** 

Process: Students are taken to the library and asked them to go through the magazines available to know the research work related to Antennas, their usage in various applications. It also give some insight of the opportunities in various fields and also what they are going to learn further in the class with the concepts taught

**Objective:** To know the research going on and the opportunities in Antenna domain

#### **Photos:**







Name of the Activity: Assessment on DFT and FFT in Digital Signal Processing

Faculty Name: Dr. V. Santhosh Kumar

Class / Semester: III/II ECE B Academic Year: 2022-23 Subject Name: DSP

#### Objectives of the Activity:

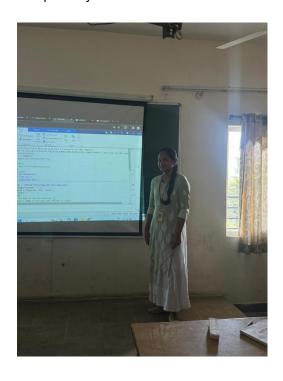
To reinforce theoretical concepts of DFT and FFT.

To understand the computational efficiency differences between DFT and FFT.

To apply these techniques in real-world signal processing scenarios.

#### Description of the Activity:

This report documents an activity conducted with third-year Electronics and Communication Engineering (ECE) students to assess their understanding and application of Digital Signal Processing (DSP) concepts, particularly focusing on the Discrete Fourier Transform (DFT) and Fast Fourier Transform (FFT). The activity aimed to bridge theoretical knowledge with practical application, enhancing students' competency in these fundamental DSP techniques.



Number of students involved: 60 Date of the activity: 27/05/2023

For any Queries, please contact: <a href="mailto:santhosh.v@bvrithyderabad.edu.in">santhosh.v@bvrithyderabad.edu.in</a>



### Name of the Activity: Practical Demonstration of plotting Radiation Pattern for Various antennas

Faculty Name: Ms. Rama Lakshmi G

Class / Semester: III/II ECE A Academic Year: 2022-23

**Subject Name**: Antennas and Wave Propagation **Topic:** Radiation Pattern of Various Antennas

#### **Brief Write-up (Not exceeding 200 Words)**

This experiment explores the radiation characteristics of different antenna structures using MATLAB and its Antenna Toolbox. The primary focus is to visualize and analyze how antenna type, geometry, and configuration affect the radiation pattern, gain, beamwidth, and directivity. A variety of antennas including half-wave dipole, rectangular patch, uniform linear array (ULA), and circular array are modeled. Each antenna's 3D and 2D radiation patterns are simulated at standard operating frequencies (e.g., 2.45 GHz and 3 GHz). The results highlight key differences in directional properties and performance metrics.

This activity provides an interactive learning experience in electromagnetic wave propagation, practical antenna design, and pattern analysis — essential concepts for wireless communication and RF engineering.

#### **Objective:**

To reinforce key technical terms and concepts through an engaging and collaborative puzzle-solving activity.

#### **Photographs**

Antenna Type	Main Lobe Direction	Beamwidth	Gain (approx.)	Notes
Dipole	Broadside (90°)	Wide	~2.15 dBi	Symmetric pattern
Patch Antenna	Perpendicular	Medium	~6-8 dBi	Directional
ULA (8 Elements)	Steered Broadside	Narrow	~10-12 dBi	High directivity
Circular Array	Omnidirectional	Varies	~6-8 dBi	Suitable for 360°

For any queries, please contact to below mail: ramalakshmi.g@bvrithyderabad.edu.in



Name of the Activity: Techno Crossword

Faculty Name: Ms. Rama Lakshmi G

Class / Semester: III/II ECE A Academic Year: 2022-23

**Subject Name**: Antennas and Wave Propagation **Topic:** Radiation Pattern of Various Antennas

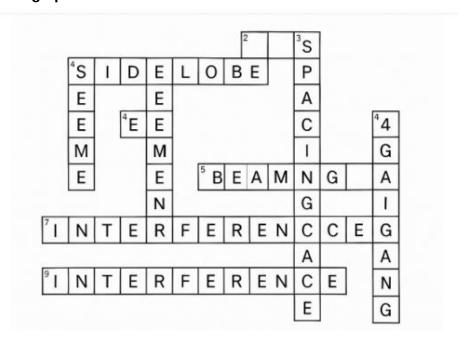
#### **Brief Write-up (Not exceeding 200 Words)**

The *Techno Crossword* is a gamified learning activity where participants solve a crossword puzzle filled with terms related to technology, engineering, and innovation. This activity encourages students to recall definitions, applications, and abbreviations commonly used in their field of study (e.g., IoT, AI, Electronics, Programming, Cybersecurity, etc.). Participants work individually or in teams to complete the crossword based on a set of clues — either definitions, use-cases, or technical synonyms. It promotes critical thinking, teamwork, vocabulary building, and content retention in a fun, low-pressure environment.

#### **Objective:**

To reinforce key technical terms and concepts through an engaging and collaborative puzzlesolving activity.

#### **Photographs**



For any queries, please contact to below mail: ramalakshmi.g@bvrithyderabad.edu.in



**Department of Electronics and Communication Engineering** 

**Activity:** Animation

Faculty Name: Mr.N.M.Sai Krishna

Class: III – II / ECE – A & B

Academic Year: 2022-23

Subject Name: VLSI Design

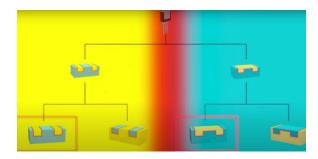
**Topic:** MOSFET

**Date:** 20-02-2023

**Brief Write - Up** 

The session on the working of E-MOSFETs for 132 students used an animation-based approach to make the concept easier to understand. It started with a brief explanation of E-MOSFETs, their structure, and applications, followed by an animation that showed how the device operates. The animation explained the formation of the conductive channel, the role of the insulating oxide layer, and how the drain current changes with gate-to-source voltage. Students were encouraged to ask questions and participate in discussions to clarify their doubts. After the animation, they worked in groups to solve simple problems related to E-MOSFETs, helping them connect theory with practical applications. By the end of the session, students had a clear understanding of the topic and could confidently explain how an E-MOSFET works. The use of animation made the learning process engaging and effective.

#### Photo(s):





**Impact:** This activity boosted their confidence in innovation and prepared them for real-world problem-solving, making learning more engaging and effective.